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GROUP 3600

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 09/850,383
Filing Date: May 07, 2001
Appellant(s): DIETRICH, BRENDA LYNN

Phillip E. Miller, Registration No. 46,060
<u>For Appellant</u>

EXAMINER'S ANSWER

This is in response to the appeal brief filed July 10, 2006 appealing from the Office

action mailed February 8, 2006.

(1) Real Party In Interest

The statement regarding the real party in interest contained in the brief is correct.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US Patent 5,905,975	Ausubel
US Patent 6,718,312 B1	McAfee et al.
US PreGrant Publication 2002/0016759	Macready et al.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1.   **Claims 1, 2, 6, 7, 11, 12 and 13 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Ausubel (US Patent 5,905,975).

Re. Claims 1, Ausubel discloses a computer implemented method for an auction comprising the steps of:

(1) establishing an auction system (Abstract, ll. 1-2; Col. 1, ll. 61-65); and

(2) receiving at least one constraint specified by a participant in the auction wherein the constraint characterizes combinations of items desired by the participant within the auction system (Col. 2, ll. 39-50; Col. 29, ll. 4-14); and

Ausubel does not explicitly disclose determining a winner in the auction, based on the constraint specified by the participant. As such, Ausubel does not use the term "winner(s)" in his teaching. However, Ausubel does disclose transactions which result from the auctions taught by him. An ordinary practitioner of the art at the time of Applicant's invention would have understood that both parties to an auction transaction are winners in the commonly understood meaning of any transaction which results from an auction, since both parties have to be satisfied that they are each better off by entering into the transaction versus not entering into the transaction. This makes each one a winner in the common understanding of the matter. On the other hand, at least one of the two parties to a transaction would not participate in the consummation of a transaction if they thought that a proposed transaction would make them a "loser" (i.e. a

non winner), which would be the case if they viewed the offered transaction to be not to their benefit as they define the benefit. Thus, no transaction would occur and thus no winner would be possible if there is no transaction. Therefore, it would have been obvious to an ordinary practitioner of the art at the time of Applicant's invention to have combined the art of Ausubel with the common understanding about transactions and particularly about transactions resulting from an auction process, motivated by a desire to offer and implement improved auction methods (Ausubel, Col. 1, ll. 15-16).

Re. Claim 2, Ausubel discloses a method wherein the auction system is elected from <u>a</u> group consisting of an open cry auction, an ascending bid auction, and a descending bid auction (Col. 1, ll. 21-22, 61-65).

Re. Claim 6, Ausubel discloses a method enabling the auction system so that it is responsive to constraints selected from the group consisting of a maximum quantity constraint, a minimum quantity constraint, a precedence constraint, and a general linear constraint (Col. 2, ll. 39-40; Col. 6, ll. 56-58).

Re. Claim 7, Ausubel discloses a method comprising enabling the auction system so that it is responsive to seller constraints (Ausubel's method has inherent seller constraints without which the auction could not function. These constraints are established in the auctioneer's intelligent system for providing auction information to bidders, and then for evaluating bids – Abstract.).

Re. Claim 11, Ausubel discloses a method of formulating a winner determination problem with the constraint specified by the participant as an integer problem (Please refer to the rejection of claim 1 regarding winner determination and constraints. Further, Ausubel teaches the use formulation and processing of an auction process through the use of an integer approach (Fig's 3D-12B)).

Re. Claim 12, it would have been obvious to an ordinary practitioner that Ausubel discloses a method of applying the integer program for determining at least one winner (Col. 1, l. 61 – Col. 5, l. 40).

Re. Claim 13, Ausubel discloses a program medium executable in a computer system for facilitating an auction (Col. 6, ll. 15-49), the program medium comprising machine-readable instructions to pause the computer system to execute steps for:

(1) establishing an auction system (Abstract, ll. 1-2; Col. 1, ll. 61-65); and

(2) enabling the auction system so that it is responsive to constraints specified by or on behalf of a participant in the auction, wherein the constraints characterize combinations of items desired by the participant within the auction system (Please see the rejection of claim 1).

Ausubel suggests generating a proposal, based on the constraints specified by the participant, using a column generation formulation (Fig. 3D displays bid data in a column. Making use, analyzing and displaying data in columns and matrices has been a basic display for a long time. It is also a technique used in mathematical and computer software analytical and parsing techniques). Therefore, it would have been obvious to the ordinary practitioner of the art at the time of Applicant's invention to have combined the art of Ausubel to for the purpose of executing a program in a computer system for operating an auction with machine readable instructions and making use of column generation techniques, motivated by a desire to offer and implement improved auction methods (Ausubel, Col. 1, ll. 15-16).

Re. Claim 14, Ausubel discloses or suggests a computer implemented method for facilitating an auction comprising:

receiving constraints specified by a participant in the auction, wherein the constraints characterize combinations of items desired by the participant within an auction system (see the rejection of claim 1); and

formulating a winner determination problem, with the constraints specified by the participant, as an integer problem (see the rejections of claims 1 and 11).

Re. Claim 15, Ausubel discloses method comprising determining winners from among participants in the auction by applying the integer program (See the rejection of claim 11).

Re. Claim 16, Ausubel discloses a method specifying combinatorial bids by interpreting the constraints. Applicant defines combinatorial bidding as a "computer implemented system for a combinatorial auction. One or more bidders participate in the auction. Two or more items are being auctioned." (p. 14, ll. 13-14). It would have been obvious to an ordinary practitioner at the time of Applicant's invention that Ausubel teaches such an

auction, since Ausubel teaches or suggests two or more bidders and two or more items (See the rejection of claim 1).

Re. Claim 17, Ausubel discloses a method of generating a proposal based on the constraints specified by the participant using a column generation formulation (see the rejection of claim 13).

Re. Claim 18, Ausubel discloses a method wherein the proposal comprises a set of bids from the participant that satisfies the constraints specified by the participant (See the rejection of claims 1 and 13).

Re. Claim 19, Ausubel discloses a method wherein the constraints are represented by linear relationships between indicator variables on bids from the participant (See the rejection of claim 6).

2.   Claims 3, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ausubel as applied to claim 1 above, and further in view of McAfee et al. (US Patent 6,718,312 B1, hereafter McAfee).

Re. Claim 3, Ausubel does not explicitly disclose a method wherein the constraints characterize combinations of bids from the participant for the desired items within the auction system. However, Ausubel does in fact teach and suggest the use of constraints and the combination of items desired by participants by participants in an auction process (see the rejection of claim 1). Further, McAfee discloses a method wherein the constraints characterize combinations of bids from the participant for the desired items within the auction system (Abstract, l. 8; Col. 1, l. 9; Col. 5, ll. 19-20: Col. 9, ll. 66-67). It would have been obvious to an ordinary practitioner at the time of Applicant's invention to have combined the art of Ausubel with that of McAfee in order to be responsive to constraints that characterize combinations of items, motivated by the desire to offer combinatorial auction methods and systems that eliminate associated bidding problems (McAfee, Col. 9, ll. 59-63).

Re. Claim 4, Ausubel does not explicitly disclose a method enabling the auction system so that it is responsive to a budget constraint. However, McAfee discloses a method which comprises enabling the auction system so that it is responsive to a budget

constraint (Col. 6, II. 1-3, 58-62. McAfee's method teaches a method responsive to a budget constraint). It would have been obvious to an ordinary practitioner at the time of Applicant's invention to have combined the art of Ausubel with that of McAfee to be responsive to budget constraints, motivated by the desire to offer combinatorial auction methods and systems that eliminate associated bidding problems (McAfee, Col. 9, II. 59-63).

Re. Claim 5, Ausubel does not explicitly disclose a method wherein the budget constraint is specified by the participant. However, McAfee suggests a method wherein the budget constraint is specified by or on behalf of the participants, which can be either the seller or buyer/bidder, or both. McAfee suggests that both parties are likely budget constrained (Col. 6, II. 1-3, 58-62. McAfee's method teaches a method responsive to a budget constraint, which in turn would have made it obvious to an ordinary practitioner at the time of Applicant's invention to consider various ways of including budget constraints into the auction process from both sellr and buyer/bidder points of view). Therefore, it would have been obvious to an ordinary practitioner at the time of Applicant's invention to have combined the art of Ausubel with that of McAfee to be responsive to budget constraints specified by or on behalf of a bidder, motivated by the desire to offer combinatorial auction methods and systems that eliminate associated bidding problems (McAfee, Col. 9, II. 59-63).

3.   **Claims 8-10 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Ausubel in view of Macready et al. (US PreGrant Publication 2002/0016759, hereafter Macready).

Re. Claim 8, Ausubel does not explicitly disclose a method wherein the seller constraints specify a minimum value for a combination of items. However, Macready discloses a method wherein the seller constraints specify a wide range of parameter possibilities (Page 6, [0077]; [0108]-II. 1-2; [0110]). It would have been obvious to the ordinary practitioner at the time of applicant's invention that these possibilities suggest the imposition of a constraint specifying a minimum value. Such a value would be based on the participant's assessment that he would be worse off to engage in a transaction

below such a minimum value). Hence it would have been obvious to an ordinary practitioner at the time of Applicant's invention to have combined the art of Ausubel with that of Macready to be responsive to seller constraints such as a minimum value for a combination of items, motivated by the desire to offer flexibility to all trading partners to locate win-win opportunities for all parties if they exist (Macready, page 2, [0012]-ll. 7-9).

Re. Claim 9, Ausubel does not explicitly disclose a method wherein of enabling the seller constraints specify a minimum value for a combination of a minimum number of items to be sold. See the rejection of claim 8. The ordinary practitioner would have seen it as obvious that minimum values could easily be involved in auctions which involve multiple items and in which the seller(s)'s constraints permit or perhaps even require bidding on a combination of items. See the rejection of claim 10 for an illustration of such circumstances. The selling participant would may have an interest in establishing a minimum value in a combination of items in the case of a car parts auction. It would have been obvious to an ordinary practitioner at the time of Applicant's invention to have combined the art of Ausubel with that of Macready to be responsive to seller constraints such as a minimum value for a combination of a minimum number of items to be sold, motivated by the desire to offer flexibility to all trading partners to locate win-win opportunities for all parties if they exist (Macready, page 2, [0012]-ll. 7-9).

Re. Claim 10, Ausubel does not explicitly disclose a method wherein the seller constraints specify a minimum value for a combination of items correlated to a precedence relationship. However, Ausubel teaches conditions submitted by buyers as a part of their bids. Further, Macready teaches that the auction process cannot proceed until bidder conditions are fulfilled ([00340]-ll. 3-4). Also, Applicant defines precedence constraints as available to both sellers and buyers (page 6, ll. 4-18), simply as a previously established bid or offer, or a previously established condition, which has to be met if a newly submitted condition, bid or offer is to be accepted. An ordinary practitioner would have been familiar with such conditional offers and would have known that the conditional offers can be based on an unlimited number of factors, including previously submitted terms, conditions, offers or bids. Macready also discloses a method of enabling the auction system so that seller constraints specify a wide range

of parameter possibilities. Macready further teaches combinations in offers and combinations of values ([0344] and in claim 64). An ordinary practitioner would have seen that such combinations of values could easily involve bids for multiple items conditioned in whatever manner suits the bidder if two or more items are offered by a seller or even by multiple sellers who are participating in the same auction. For example, in an auction of used car parts (an industry which has become quite sophisticated in the era of personal computers) it would be reasonable for a bidder to establish a bid for a front grill assembly for a certain year/model car conditioned on the preceding bid for the body of the same make/model car which he has determined has a smashed grill. It would have been obvious to an ordinary practitioner at the time of Applicant's invention to have combined the art of Ausubel with that of Macready and well known practices to be responsive to seller constraints such as a minimum value for a combination of items correlated to a precedence relationship, motivated by the desire to offer flexibility to all trading partners to locate win-win opportunities for all parties if they exist (Macready, page 2, [0012]-ll. 7-9).

(10) Response to Arguments

4.   Appellant's arguments filed July 10, 2006 with respect to claims 1-19 have been fully considered but they are not persuasive.

TYPOGRAPHICAL ERRORS: The examiner acknowledges two typographical errors in the final rejection. The rejections of all the claims were placed entirely under the 35 USC 103 statute as indicated in the banner heading under the Office action's heading of "DETAILED ACTION". The typographical errors occurred in the first of the three subsidiary rejection statements when the examiner had to change the basis of the rejections from a 102()b) to a 103(a) due to Appellant's amendment of claims (see the Conclusion on page 8 of the final rejection which states that "Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action"). The final rejection statement of claim 1 reads as follows: "**1.   Claims 1, 2, 6, 7, 11, 12 and 13 are rejected** under 35 U.S.C. 102(b) as being unpatentable over (US Patent 5,905,975)". The typographical errors in this form statement are the presence of 102(b)

instead of 103(a) and the omission of the name "Ausubel". Both of these errors have been corrected above. It is clear from the way in which the Graham vs Deere format was applied in the final rejection of independent claim 1 that this is an obviousness rejection, and that all claims dependent on claim 1 were rejected under 103(a). The rejection statement's language format is taken from the obviousness form paragraph. No version of the expression "anticipate" was used in the rejection. The rejection follows the Graham vs. Deere obviousness rejection format by beginning with what Ausubel discloses. This is followed in the beginning of the fifth line of the body of the rejection of claim 1 by what Ausubel does not disclose ("Ausubel does not explicitly disclose ..."). The rejection then completes the remainder of the Graham vs Deere obviousness rejection format. The examiner regrets any inconvenience caused by these typographical errors.

I.   ARGUMENTS Re. Independent Claims 1, 13 and 14; independent claim 1 as exemplary.

ARGUMENT A: "The Examiner alleges that the invention of claims I, 2, 6, 7 and 11-19 are <u>anticipated</u> (underlining added) by Ausubel. However, Appellant respectfully submits that the reference does not teach or suggest each and every element of the claimed invention" (page 7, lines 1-3).

RESPONSE: The rejections of claims 1, 13 and 14 in the final rejection are obviousness rejections under 35 USC 103(a). Appellant acknowledges in his arguments that the examiner explicitly has stated that Ausubel does not (explicitly) teach every element of the invention of claim 1 (example – page 7, lines 6-8, where Appellant quotes a statement made by the examiner in the final rejection of claim 1: '...as conceded by the Examiner, Ausubel does not teach or suggest "determining a winner in the auction ..."'). Accordingly, this argument has no basis in fact.

ARGUMENT B: '... the Examiner is misconstruing the term "constraint" in claim 1. Indeed, Appellant submits that **the Examiner is construing the term "constraint" in a manner which is 1) contrary to its commonly accepted meaning in the art, and 2) certainly contrary to the meaning of the term as used in the Specification'**

(page 7, lines16-20).

"Indeed, Appellant suspects that the Examiner may be attempting to construe the term "constraint" by using a general definition of the term. However, Appellant submits that the term should be construed as the term is used **in the field of mathematics.** Appellant would point out that **in the field of mathematics,** the term "constraint" may be construed to mean "a restriction of the feasible solutions in an optimization problem" (e.g., see wikipedia.org/wiki/Constraint) (emphasis added). Even assuming (arguendo) that Ausubel teaches or suggests an "optimization problem", **nowhere does Ausubel teach that a "bidding rule" is used as a restriction of the feasible solutions in such an optimization problem.** Therefore, the Examiner is clearly construing the term "constraint" in a manner contrary to its commonly accepted definition. Further, Appellant would point out that the term "constraint" is used in the Specification in a manner similar to the commonly accepted definition." (page 8, lines 9-20). ...... "Therefore, it is completely unreasonable for the Examiner to attempt to equate the "bidding rules" in Ausubel with the "constraint" in the claimed invention " (page 9, ll. 7-8).

RESPONSE:

1. Appellant argues that the examiner has used a commonly accepted definition of the term "constraint" when it should receive the mathematics definition, while also arguing that the Specification uses the term "constraint" "in a manner similar to the commonly accepted definition" (page 8, lines 10-11, 19-20). <u>There seems to be a contradiction in these seemingly opposing arguments, since the examiner is not arguing on both sides of the issue.</u> The examiner is either interpreting the word constraint in the context of applied mathematics for decision making, which is the examiner's view, or the examiner is applying a broad interpretation of the word "constraint" similar to the commonly accepted definition, which is not the examiner's position. The remaining responses to Appellant's arguments will demonstrate the examiner's interpretation as being that appropriate to the art which Appellant and Ausubel both disclose.

2. The examiner has been unable to find a special definition of the term "constraint" in Appellant's specification. The closest thing to an attempt at a special definition the

examiner has been able to find is Appellant's use of the expression "constraint" in describing the bid inputs by the bidder. There is nothing wrong with that usage by itself. However, Appellant's reference to page 9, lines 9-20 (the page actually ends with line 18) fails to disprove the examiner's rationale. This excerpt merely illustrates Appellant's use of the word "constraint" without demonstrating that synonyms for the word are "constraint" somehow inappropriate. To insist that the language used by Ausubel somehow changes the nature of the mathematical methodology being employed is artificial and misuses and narrows beyond reasonableness the language as understood in the art of computer automated mathematical algorithms being employed as aids to rational decision making because many other constraints are also being employed in Appellant's invention, as they are in Ausubel's teaching. The difference between the two disclosures is that Ausubel employs the expression "constraint" much more sparingly than Appellant, even though he does use it a few times in the some of the detailed explanations of how to implement some of the embodiments (see below). However, the ordinary practitioner would have understood that Ausubel's methodology is based on determining optimal solutions of auction outcomes using many constraints, some being built in as rules, some constraints built in to optimize for certain goals such as maximizing revenue or maximizing units sold or for solving for the solution which sells 100% of the items offered in the auction, and with some constraints built in as bidder and seller inputs. Further, Appellant implies in his specification on page 6, lines 16-18 that the algorithm being employed is a linear programming model. Linear programming has been a well known algorithmic method of applied mathematics to aid in decision making which uses approximations to produce practically optimized solutions (though theoretically sub-optimal) to a problem which is expressed in terms of quantitative parameters put through one or more equations which contain various constraints in the equations themselves, and which make use of a select few variable constraints which are the inputs for which the equation is being solved. In the case of an auction, these variable inputs are the seller and bidder inputs (i.e. the bids). In the auction application, every parameter, whether a rule or a bidding input, is a constraint. The practitioner is able to increase or decrease the number of constraints in the algorithm by increasing or

decreasing the total number of rules, seller and bidder inputs and other parameters. Therefore, if anyone is being unreasonable in the context of obviousness it is Appellant's argument that Ausubel is not using constraints similar to those used by Appellant.

3. Wikipedia.org is not an authoritative source for guidance in this subject matter. The wikipedia.org quotation fails to provide rational support to Appellant's argument because it does not overturn the examiner's rationale. If anything, the wikipedia.org quotation is consistent with the examiner's interpretation. Appellant would need to provide a deeper and broader exposition from the art of quantitative aids to decision making, perhaps with valid expert testimony, to demonstrate that the examiner's rationale for what one of ordinary skill would have understood in this matter to be in error.

4. Examples of Ausubel's use of the expression "constraint" and synonyms thereof regarding the bidder's inputs using Appellant's use of the expression "constraint" as a guide (BOLDING and underlining are added):

(a) "Let us reinterpret blocks 903 and 904 as querying for and receiving bids which now comprise pairs (.omega.,P), where .omega..di-elect cons..OMEGA. is an element of the set of objects being auctioned. Stated differently, the generalized English auction allowed bids whose first component was a set; the FCC auction only allows bids whose first component is a single object. Let us also reinterpret block 907 as maximizing the bid revenues, without our previous **<u>constraint</u>** that only one bid per user is accepted. Stated differently, since the FCC auction does not allow bids for sets of objects, the auction generally involves the acceptance of more than one bid per user (i.e. the FCC simply accepts the highest bid on each object). With these two reinterpretations, we have now described the implementation of the FCC auction on the flexible bidding system". (Col. 34, ll. 34-54).

(b) " The present invention, in one respect, is a computerized system which allows flexible bidding by participants in a dynamic auction, combining some of the advantageous facets of the sealed-bid format with the basic advantages of an ascending-bid format. At any point in the auction, bidders are provided the opportunity to submit not only their current bids, but also to enter future bids (to be more precise, bidding rules which may have the opportunity to become relevant at future times or

prices), into the auction system's database. Moreover,
participants are continually provided the opportunity to revise
their bids associated with all future times or prices which have
not already been reached, by entering new bids which have the
effect of superseding this bidder's bids currently residing in
the auction system's database. Thus, at one extreme, a bidder
who wishes to economize on his time may choose to enter his
entire set of bidding rules into the computerized system at the
start of the auction, effectively treating this as a sealed-bid
auction. At the opposite extreme, a bidder who wishes to
closely participate in the auction may choose to constantly
monitor the auction's progress and to submit all of his
bids in real time. Most bidders are likely to select an
approach somewhere between these extremes: a bidder may enter a
preliminary set of **bidding rules** at the start of the auction,
but then periodically choose to revise his bidding rules as
information is generated through the auction process. He can
avoid the necessity of spending every minute of his time
monitoring the auction, but still avail himself of the
opportunity to respond to his competitors' bids. By the same
token, the auctioneer can run the auction at a faster pace and
using smaller bid increments with the present invention than
with a system only permitting contemporaneous bids; no bidder
need risk missing a submission deadline and completely losing
out on placing desired bids (or being disqualified from the
auction), as his bidding rules residing in the auction
system database fill in until the bidder chooses to revise them.
(Col. 1, l. 61 – Col. 2, l. 29).

(c) In order to obtain the advantages of the invention, each
of the bidders uses a dedicated user system and the auction
itself is monitored and controlled via an auctioneer's system.
The auctioneer's system can communicate messages to each of the
user systems. The messages are used to initiate an auction and
the message initiating an auction may carry with it information
describing the particular auction being initiated. The users
may thereafter enter flexible bid information which can include
a scalar-value, vector-value or a function. The flexible bid
information may be an expression of how many units of object(s)
a bidder is willing to purchase at a given price(s), how much
money a bidder is willing to pay for the purchase of a given
object(s), or any other expression of the willingness-to-pay or
value which a bidder places on object(s). Optionally, a bidding
rule may also include a limitation (e.g. "I desire up to a
quantity of x at a price P, but I do not want any positive

quantity at all unless I receive a minimum quantity of y").
Thus, a **bidding rule** may include an unconditional bid or a
contingent bid, and may consist of a function from available
information to bid quantities (e.g. a function of the previous
bid(s) submitted) " (col. 1, l. 61 – Col. 2, l. 50).

5.   The ordinary practitioner of the art would have found Ausubel's use of the concept
of "constraints" in the language of "bidding rules" to be a readily understood synonym
for Appellant use of the word "constraint' for the following reasons: Appellant's
argument states 'that the term should be construed as the term is used **in the field of
mathematics.** Appellant would point out that **in the field of mathematics,** the term
"constraint" may be construed to mean "a restriction of the feasible solutions in an
optimization problem' (quoted from the argument above). Appellant's statement would
have been acceptable in part by an ordinary practitioner of the art. However, the limits
Appellant attempts to impose on the ordinary practitioner's understanding and use of
the expression "constraint", on the synonyms for this word used in the art and on the
application of the concept of constraints would have been artificial, unreasonable and
unacceptable to the ordinary practitioner because the practice of this applied segment
of mathematics, (a subset of the art known as operations research), uses the concept of
constraints broadly. Appropriate synonyms used in the art include such expressions as
rules, boundaries and parameters, just to name some of the more common synonyms.
All parameters in the mathematical equations and programming limitations are
constraints in the art of obtaining a solution to this kind of problem. As noted above,
Ausubel does use the expression "constraint" several times in his disclosure. As also
demonstrated above, both Appellant and Ausubel use the expression "rules" to
distinguish between certain types of constraints.
It can be readily seen in the comparison of the actions being described by Appellant and
Ausubel that Ausubel uses different expressions from Appellant to describe the same
things, since Appellant's bidder input "constraint" is described by Ausubel's "bidding
rules". The word "constraint" represents a key concept in these models and Ausubel
does use the word in a number of places (col. 29, l. 9; col. 31, l. 36; col. 34, l. 41). It

should be kept in mind that Ausubel's use of the expression "bidding rules" are called "constraints" by Appellant. An ordinary practitioner of the art at the time of Appellant's invention would have seen this and still retained the choice of which words to use in his invention while following Ausubel's methodology for determining auction winners.

6. Therefore, it would have been obvious to an ordinary practioner of the art at the time of Appellant's invention that Ausubel teaches what Appellant argues he does not teach regarding the use of the concept of "constraints" in determining auction results. 14, l. 21 – col. 15, l. 62). Consequently, an ordinary practitioner of the art at the time of appellant's invention would have found it obvious and most reasonable to use the disclosures of Ausubel in the process of inventing a computer automated method and system to assist in determining the winners of an auction.

ARGUMENT C: 'Ausubel certainly does not teach or suggest "*determining a winner in the auction, based on the constraint specified by the participant*" (page 9, lines 10-11; page 7, lines 7-15; page 10, lines 4-12, 16-17).

RESPONSE: The examiner has already presented a reasonable rationale for Ausubel's implicit teaching that his teaching produces auction winners. The examiner's rationale has been that the expression "winners" has been a commonly understood outcome of the bidding process when transactions have resulted from the auction bidding process, that winners are the ones whose bids are accepted, and that both sellers and buyers are winners unless no bids are accepted and there are no transactions. In an auction, a bidder submits one or more sets of constraints which are his one or more bids. He wins if one or more of his bids are accepted and result(s) in one or more transactions. Ausubel's teaching minimizes the use of the expression "winner", as he also minimizes use of the word "constraint". However, Ausubel does in fact use the word "won", a past tense of win, eleven times deep inside detailed explanations of some of embodiments, beginning in Col. 16, lines 35-40. Of course, someone who "won" is a winner. All of this would have been entirely consistent with what the ordinary practitioner's understanding of Ausubel's teaching would have been because Ausubel's teaching is consistent within the art of auctions. It just shows that it

is a natural term for identifying the bidders who submit the most valuable bids according to the constraints used by the auctioneer in his algorithm. This is also consistent with the common understanding that both seller and buyer are winners when a transaction takes place.

ARGUMENT D:　　" ... the Ausubel system is unrelated to the claimed invention" (page 9, lines 18-19).

RESPONSE:　　In the context of obviousness, Ausubel is completely related to Appellant's claimed invention. It stretches credulity to assert otherwise. Both Appellant and Ausubel disclose inventions for determining auction results through the use of a computer automated mathematical algorithm. Both of the detailed descriptions of the algorithms being employed suggest the use of linear programs, although that is not claimed by Appellant or Ausubel, but merely implied in Appellant's claims, in Appellant's disclosure and in Ausubel. Finally, as presented in the detailed rejections of the claims, Ausubel's teaching would have made Appellant's invention obvious to an ordinary practitioner at the time of Appellant's invention. Therefore, Ausubel is directly related to the claimed invention within the obviousness concept of 35 USC 103(a).

ARGUMENT E:　　"... there is no teaching or suggestion that "the constraint characterizes combinations of items desired by the participant within the auction system (page 10, lines 14-16).

RESPONSE:　　The rejection of claim 1 points to places in Ausubel where he discloses bid combinations for items being offered. Additional disclosures of combination bidding in Ausubel's teaching are found in col. 14, ll. 26-31 (how bidders may value two broadcast licenses together), and in col. 22, lines 22-30, where Ausubel discloses what a bidder may be willing to pay for various combination subsets of items being offered in an auction. These disclosures clearly teach bidding constraints which characterize combinations of items desired by the participant within he auction system.

II. **ARGUMENTS Re. Dependent Claims;**

ARGUMENT A: **Re. Dependent claims 3 & 9–** "Appellant respectfully submits that

these references would not have been combined as alleged by the Examiner. Indeed, no

person of ordinary skill in the art would have considered combining these disparate

references, absent impermissible hindsight.

In fact, Appellant submits that the Examiner can point to no motivation or suggestion

in the references to urge the combination as alleged by the Examiner. Indeed, contrary to

the Examiner's allegations, neither of these references teaches or suggests their

combination.

Therefore, Appellant respectfully submits that one of ordinary skill in the art would

not have been so motivated to combine the references as alleged by the Examiner.

Therefore, the Examiner has failed to make a prima facie case of obviousness." (page

18, lines 9-18; page 21, lines1-14).

RESPONSE: The above rejection rationale and the examiner's additional

responses to Appellant's arguments make it clear that an ordinary practitioner of the art

at the time of Appellant's invention would have considered Ausubel would have been

found directly relevant to his desire to implement a computer implemented method for

an auction.

The ordinary practitioner of the art at the time of Appellant's invention would have found

good reasons and good motivation to combine Ausubel with MacAfee and Macready for

the reasons stated in the rejections of claims 3 and 9. MacAfee teaches in the directly

analogous art of computer automated auctions. Macready teaches in the analogous art

of buying and selling, and maximizing the utility of the buyer, and exploiting the

possibilities for providing win-win trades" and for using optimization techniques and

decision factors (Abstract, lines 1-4, 6, 10). These purposes and techniques are directly

related to the solution of auctions, particularly in the sophisticated art of computer

developing automated auction solutions using mathematical techniques to aid decision

making. Appellant, Ausubel, MacAfee and Macready each operate in the same

mathematical space of rational aids to decision making.

Regarding the argument of the use of impermissible hindsight: As per *In re McLaughlin*,

170 USPQ 209 (CCPA 1971). ⅋Any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning, but so long as it takes into account only knowledge which was within level of ordinary skill at time claimed invention was made and **does not include knowledge** gleaned **only from applicant's disclosure,** reconstruction is proper.⅋

In this case, the examiner has demonstrated that he has considered the ordinary skill at

the time the claimed invention was made, and that he has used a substantial amount of

knowledge gleaned from sources other than those from Appellant's disclosure.

Regarding the argument of the use of failing to have made a *prima facie* case of

obviousness:

The recent ruling of *In re Kahn* supports outlines the criteria for making a *prima facie*

case of obviousness as follows:

> "A suggestion, teaching, or motivation to combine the relevant prior art teachings does not have to be found explicitly in the prior art, as the teaching, motivation, or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references. . . . The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art. In re Kotzab, 217 F.3d 1365, 1370 (Fed. Cir. 2000). However, rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. See Lee, 277 F.3d at 1343-46; Rouffett, 149 F.3d at 1355-59. This requirement is as much rooted in the Administrative Procedure Act, which ensures due process and non-arbitrary decisionmaking, as it is in § 103. See id. at 1344-45." In re Kahn, Slip Op. 04-1616, page 9 (Fed. Cir. Mar. 22, 2006).

In this instance, the examiner has met the standards presented by *In re Kahn* as stated above. The examiner has pointed to a combination of explicit, implicit, suggested and obvious reasons, to the knowledge of the ordinary practitioner in consideration of the problems to be solved, supported by articulated reasoning with some rational underpinning to support the legal conclusion of obviousness in making the rejections of independent claims 1, 21, 24, 27 and 28 under the 35 USC obviousness statute. The examiner has thus met the standards for making a *prima facie* case of obviousness.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the

Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.
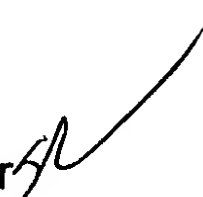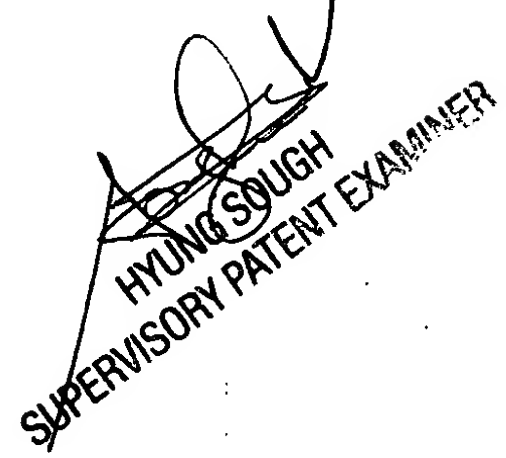
Respectfully submitted,

Siegfried E. Chencinski

Patent Examiner

Conferees:

Huyng S. Sough, Supervisory Patent Examiner

Frantzy Poinvil, Primary Examiner